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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,446	08/22/2001	Enrique Musoll	P3840	9578

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EXAMINER	
CHOUDHURY, AZIZUL Q	
ART UNIT	PAPER NUMBER
2145	

DATE MAILED: 05/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/935,446	MUSOLL, ENRIQUE	
	Examiner	Art Unit	
	Azizul Choudhury	2145	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20,22 and 24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20,22 and 24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

This office action is in response to the correspondence received on February 22, 2006.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 17 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

- Claim 1 claims a plurality of queues in which future packets are stored. It is unclear how future packets are stored.
- Claims 1 and 17 claims validating predicted information. It is unclear as to how predicted information is validated and what the predicted information is validated against.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20, 22 and 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Park et al (US Pat No: 6,430,156), hereafter referred to as Park.

1. With regards to claim 1, Park teaches a packet buffering system for predicatively processing data packets in a data packet network, the data packets associated with a plurality of data flows, the data flows from a plurality of protocols, the system comprising: at least one input port for receiving data packets from a plurality of sources, wherein the received data packets arrive from the plurality of data flows, interspersed (see column 5, lines 47-51, Park); at least one output port fro sending out data packets to a plurality of destinations (see column 3, lines 56-67, Park); a packet predictor, coupled to said least one input port, for predicting information about a future packet in any one of the plurality of data flows based on history of previously received packets from the plurality of data flows, said history stored in a memory coupled to said packet predictor (see column 3, lines 40-47, Park); a plurality of queues for storing packets received from said plurality of sources, and for storing said predicted information about said future packet (see column 6, lines 41-52, Park); direction logic, coupled to said packet predictor, for generating a Packet ID for said future packet which is stored in one of said plurality of queues (see column 5, lines 19-26, Park); buffer

logic, coupled to said packet predictor, for validating said predicted information about said future packet based on access to said memory (see column 6, lines 41-52, Park); and a processing core, coupled to said plurality of queues, wherein if said buffer logic validates said predicted information, notification is made to said direction logic which passes said Packet ID for said future packet to said processing core to initiate speculative processing (see column 6, line 66 – column 7, line 15, Park).

2. With regards to claim 2, Park teaches the system wherein the data packet network is the Internet network (Park's design involves communications systems, also known as networks (see column 1, lines 6-18, Park)).

3. With regards to claim 3, Park teaches the system wherein the packet predictor utilizes a history record periodically updated by the system, to generate predicted data (see column 6, line 66 – column 7, line 15, Park).

4. With regards to claim 4, Park teaches the system wherein the history record comprises characteristics of recently received data packets (see column 6, line 66 – column 7, line 15, Park).

5. With regards to claim 5, Park teaches the system wherein the history record further comprises results of past predictions (see column 6, line 66 – column 7, line 15, Park).

6. With regards to claim 6, Park teaches the system wherein said packet predictor predicts specific characteristics, comprising one or more of packet type, packet flow identification, sender information, destination information, and packet size for said future packet (see column 6, line 66 – column 7, line 15, Park).

7. With regards to claim 7, Park teaches the system comprising a packet router (Park's design involves traffic control (see column 1, lines 6-18, Park)).

8. With regards to claim 8, Park teaches the system comprising a data server (Park's design involves traffic control (see column 1, lines 6-18, Park)).

9. With regards to claim 9, Park teaches a packet predictor system for predicting information about future packets to be received within a data packet processor, the future packets associated with a plurality of data flows a plurality of protocols, the predicted information being processed by a processing core prior to the future packets being received, the processing reducing latency in routing the future packets to their destinations, the system comprising: an input for receiving information about non-predicted packets received for processing (see column 5,

lines 47-51, Park); a packet predictor, coupled to said input, for predicting information about the future packets, based upon the information received about the non-predicted packets (see column 3, lines 40-47, Park); a plurality of queues, coupled to said input and said packet predictor, for storing the predicted information (see column 6, lines 41-52, Park); and a processing core, coupled to said plurality of queues, for processing the predicted information before the future packets are received by said input; wherein by processing the predicted information before the future packets are received, latency for delivering the future packets to an output is reduced (see column 6, line 66 – column 7, line 15, Park).

10. With regards to claim 10, Park teaches the packet predictor system wherein the data packet processor comprises a data router operating on the Internet network (Park's design involves traffic control in a communications system (see column 1, lines 6-18, Park)).

11. With regards to claim 11, Park teaches the packet predictor system comprising a history record consulted each time a prediction is made (see column 6, line 66 – column 7, line 15, Park).

12. With regards to claim 12, Park teaches the packet predictor system wherein the history record comprises history of real packets received and processed (see column 6, line 66 – column 7, line 15, Park).

13. With regards to claim 13, Park teaches the packet predictor system wherein the history record comprises history of predictions and results of predictions (see column 6, line 66 – column 7, line 15, Park).

14. With regards to claim 14, Park teaches the packet predictor system wherein the history record is stored in a memory accessible to the system (see column 6, line 66 – column 7, line 15, Park).

15. With regards to claim 15, Park teaches the packet predictor system wherein said packet predictor predicts specific characteristics, comprising one or more of packet type, packet flow identification, sender information, destination information, and packet size (see column 3, lines 40-47, Park).

16. With regards to claim 16, Park teaches the packet predictor system wherein the data packet processor comprises a data server (Park's design involves traffic control (see column 1, lines 6-18, Park)).

17. With regards to claim 17, Park teaches a method for reducing latency in packet processing within a packet processor, comprising the steps of: receiving packets associated with a plurality of data flows, the data flows from a plurality of protocols (see column 5, lines 47-51, Park); developing and storing a history of packet information from the received packets (see column 6, lines 41-52, Park); predicting future information about future packets from the stored history (see column 3, lines 40-47, Park); validating the future information about the future packets from the stored history, and if validated (see column 6, lines 41-52, Park); processing the future information about the future packets before the future packets are received; wherein by processing the future information about the future packets before the future packets are received, latency in delivering the future packets to their destinations is reduced; and wherein the information comprises one or more of packet type, packet flow identification, source information, destination information, and packet size (see column 6, line 66 – column 7, line 15, Park).

18. With regards to claim 18, Park teaches the method wherein the packet processor is coupled with a data packet network (Park's design involves communications systems, also known as networks (see column 1, lines 6-18, Park)).

19. With regards to claim 19, Park teaches the method wherein the data packet network is the Internet network (Park's design involves communications systems, also known as networks (see column 1, lines 6-18, Park)).

20. With regards to claim 20, Park teaches the method comprising a step for maintaining a history of either or both of packets actually received and results of prior predictions (see column 6, line 66 – column 7, line 15, Park).

21. With regards to claim 22, Park teaches the method wherein said step of processing is abandoned if it is determined not to agree with the real data once it arrives (see column 6, lines 41-52, Park).

22. With regards to claim 24, Park teaches the method wherein in, if some of the results from processing the predicted future information are wrong they are abandoned, and results which are correct are retained, to reduce processing for an arriving packet based on the prediction (see column 6, line 66 – column 7, line 15, Park)

Remarks

The amendment received on February 22, 2006 has been carefully examined but is not deemed fully persuasive. In lieu of the claim amendments, a new search has been performed and the current office action has been compiled.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Azizul Choudhury whose telephone number is (571) 272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Cardone can be reached on (571) 272-3933. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC

JASON CARDONE
SUPERVISORY PATENT EXAMINER